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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,603	01/08/2002	Steven Doe	1076.40919X00	7770

20457 7590 01/28/2004

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EXAMINER

NEGRON, ISMAEL

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/038,603	DOE, STEVEN	
	Examiner	Art Unit	
	Ismael Negron	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8 and 10-18 is/are rejected.
- 7) ☒ Claim(s) 1, 6 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed on June 26, 2003 has been entered. Claims 1 and 15 have been amended. No claim has been cancelled. Claims 17 and 18 have been added. Claims 1-18 are still pending in this application, with claims 1 and 15 being independent.

### *Claim Objections*

2. Claim 1 is objected to because of the following informalities: the word "imbedded" in line 3, should read --embedded--. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7, 8 and 10-18 are under 35 U.S.C. 103(a) as being unpatentable over TSAI (U.S. Pat. 5,739,879) in view of MATSUI et al. (U.S. Pat. 5,021,931).

Tsai discloses a backlighting device for LCD, such device having:

- **a radiation source**, Figure 6, reference number 66;
- **a layer associated with the radiation source**, Figure 6, reference number 65;
- **a light guide**, Figure 6, reference number 60;

- **the layer containing a matrix of particles that emit visible light in response to the radiation source**, column 6, lines 16-24;
- **the radiation source emitting invisible light**, column 8, line 22;
- **the radiation source emitting ultra-violet light (UV light)**, column 4, line 22;
- **the layer containing a matrix of phosphors or fluorescent particles**, column 8, lines 24-44;
- **the particles being distributed to provide uniform light intensity**;
- **the particles being of a single color**, column 6, lines 52-58;
- **the particles being of different colors**, column 6, lines 52-58;
- **a reflector disposed on the layer**, column 6, lines 45-47; and
- **an LCD**, column 5, lines 55-60.

Tsai discloses all the limitations of the claims, except the layer being included in the light guide, the matrix being embedded in the light guide, or the LCD being used in a mobile telephone.

Matsui et al. discloses an apparatus for backlighting display panels, such light guide having:

- **a light guide**, Figure 2, reference number 10;
- **the light guide having a matrix of particles embedded therein**, column 2, lines 19-27; and
- **the particles emitting light in response to stimulating light**, column 2, lines 19-27.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combined the teachings of Matsui et al. with the device of Tsai to increase the efficiency and intensity of the backlighting device, while at the same time reducing its thickness, as per the teachings of Matsui et al. (see column 2, lines 54-64).

In addition, the Examiner takes Official notice of Matsui et al. statement regarding the old and well known in the art status of using fluorescent and/or phosphorescent particles to increase the efficiency of backlighting devices for image display systems (see column 1, lines 11-32).

Regarding the LCD display of Tsai being an electronic display, one of ordinary skill in the art at the time the claimed invention was made would have recognized such LCD display being an electronic display.

Regarding the LCD being used in a mobile telephone, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the LCD illumination device in a mobile phone to improved the visibility and efficiency of such mobile telephone LCD, as per the teachings of Tsai (see column 4, lines 10-18).

***Allowable Subject Matter***

4. Claims 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: Applicant teaches an LCD backlighting device having radiation source and a

layer associated with the radiation source, such layer containing a matrix of particles that emit visible light in response to the radiation source, to illuminate a LCD. The radiation source is planar or consisting of a plurality of point-like sources.

No prior art was found teaching individually, or suggesting in combination, all of the features of the applicant's invention, specifically an LCD backlighting device having a planar or point-like radiation sources for exiting a matrix of particles.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Application/Control Number: 10/038,603  
Art Unit: 2875

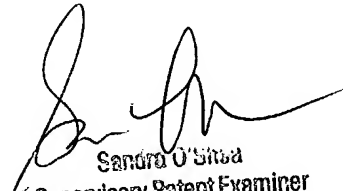
Page 6

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached at (571) 272-2378. The facsimile machine number for the Art Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Sandra O'Shea  
Supervisory Patent Examiner  
Technology Center 2800

*HLR*

Inr

January 24, 2004